B-pictures and jump to step S718.

Step S718: Start a new GOP and encode the picture P_{n+M-1} as an I-picture.

Step S720: Encode the pictures $P_n \sim P_{n+M-2}$ as B-pictures with only referencing to the picture P_{n+M-1}.

Because the present invention starts a new GOP when the scene change occurred, the image editor can cut the video sequence directly without re-coding. Therefore, the performance of the image editor can be increased and the image quality will not be loss.

While certain exemplary embodiments have been described and shown in the accompanying drawings, it is to be understood that such embodiments are merely illustrative of and not restrictive on the broad invention, and that this invention should not be limited to the specific construction and arrangement shown and described, since various other modifications may occur to those ordinarily skilled in the art.

WHAT IS CLAIMED IS:

1. A video encoding method with support for editing when scene changed, the distance between two reference pictures being defined as M in a GOP, the method comprising the steps of:

    capturing pictures in a display order;

    detecting the scene change for a picture PIC_n; and

    coding the pictures in a coding order when there is not a scene change occurred, and coding the pictures by a special processing when there is a scene change occurred;

the special processing comprising:

executing a first and a third coding stages when the picture PIC_{n-1} is not a reference picture; and

executing a second and the third coding stages when the picture PIC_{n-1} is a reference picture;

wherein the first coding stage is to re-code the picture PIC_{n-1} as a P-picture, the second coding stage is to code the B-pictures preceding the picture PIC_{n-1}, and the third coding stage is to start a new GOP, to code a picture PIC_{n+M-1} as a I-picture, and to code the pictures PIC_n to PIC_{n+M-2} as B-pictures with only referencing to the picture PIC_{n+M-1}.

2. The video encoding method of claim 1, wherein the first coding stage finishes coding the B-pictures if there are B-pictures preceding a previous reference picture.

3. The video encoding method of claim 1, wherein the first coding stage codes the B-pictures if there are B-pictures preceding the picture PIC_{n-1}.